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ABSTRACT

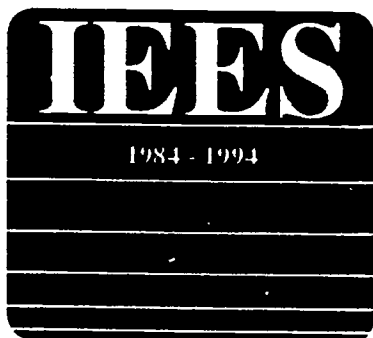
An interpretive account of two schools participating in the piloting of a new English program in Botswana junior secondary schools is presented in this paper. Methodology involved observation; analyses of school documents and student texts; and interviews with students, teachers, and administrators. Based on the perspective that teaching is an interactive exchange mediated by language, the study sought to describe the nature of classroom interactions in Botswana junior secondary schools. Examples of oral and written texts produced by teachers and students during lessons are described. With regard to communicating messages, teachers saw their goal as one of transmitting the information needed to pass the examination. This resulted in a lack of student cognitive engagement and in an emphasis on authority. With regard to creating meaning through communication, students concentrated on replicating rather than "re-presenting" information. With regard to language and learning, teachers' use of English as a second language hindered students' ability to develop language and communication skills. A conclusion is that as long as teachers rely on a transmission-of-information approach to teaching, students will be constrained by the imposed frameworks of others' knowledge. Two figures are included. Appendices contain sample lessons. (Contains 7 references.) (LMI)

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June 1991



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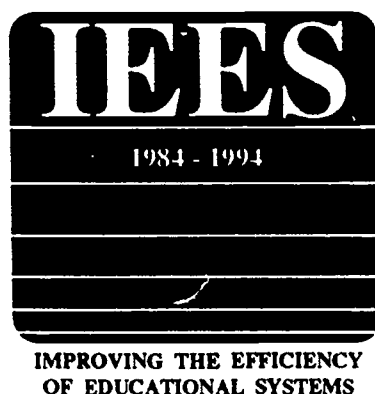
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This report is an interpretive account of two schools participating in the piloting of a new English program in Botswana junior secondary schools. The account is part of a larger study of classroom interactions which commenced in 1987 and which has involved the cooperation of students and teachers in ten widely scattered junior secondary schools. The primary intent of the study has been to portray the day-to-day patterns of events and interactions for students and teachers and in so doing, to question the assumptions, interests and meanings of the participants.

Methodology

The interpretive approach to educational research studies involves intensive participation in the field, observing and talking with participants and keeping careful record of everyday events in their particular surroundings in an attempt to recognize the significance of the pattern of events. The effort is directed towards making the commonplace problematic, such that 'what is happening can become visible, and it can be documented systematically' (Erickson, 1986). In this study, data have been derived from daily field notes taken during four weeks of all-day visits to two schools, school documents, interviews with students, teachers and administrators, and students' written and print texts. The two schools were chosen because they had participated in the trial use of materials prepared for the new program of studies in English, a program which explicitly sets out to enhance the communicative skills of students in junior secondary schools. Observations of lessons were made in all subject areas, mostly in Form 2 classes. In following just one or two classes over this period of time, it was possible to become familiar with the patterns of interactions between teachers and students.

Conceptual framework

In this account, a distinction is made between information and meaningful knowledge. Information consists of written or spoken statements conveyed from one person to another. An individual may be able to use this information by linking it with what he/she already has meaning for, and in so doing, constructing his/her personal knowledge. For that particular individual, meaningful knowledge is established through the making sense of the information. When an individual learns about something, he/she makes sense of new information through linking the ideas with an already existing cognitive framework. This framework is dynamic, subject to modification and extension as the learner makes use of further information. Only through active engagement between this evolving web of ideas and new information does learning take place. Thus learning may be thought of as a series of cognitive transactions between what is already meaningfully known and new information, through processes for which the learner has responsibility and control.

The vehicle for achieving this cognitive transaction is language, both spoken and written, which is accomplished through social exchange. From birth, individuals acquire the means to communicate in particular ways for particular purposes to particular audiences. By talking and listening, writing and reading, people achieve a large number of different aims. In schools, it may be reasonably argued that one of the principal aims is to facilitate learning, that is, the process of constructing meanings. From this perspective, teaching is an interactive exchange which is focussed on the making sense of new information by the students. The act of teaching is thus a social transaction mediated by language.

Social transactions never occur in a vacuum; they are embedded in a spectrum of contexts, patterns of social relations which give rise to a variety of institutional arrangements, expectations and ways of acting (Seddon, 1986). Thus social transactions are not conceptualized as *contained* by the contexts but are themselves integral components of the contexts and contributing to the shaping of those contexts. The focus of this study is the nature of the classroom interactions in Botswana junior secondary schools; that is, the nature of the social transactions through which learning occurs. Meanings embedded in these activities are generated by the participants and become woven into the interrelationships of school, family and community.

Language is one form of communicating meanings between individuals; other forms include music, dance, and painting. In schools, the dominant communicative mode is through the use of words and arrangements of words which results in the production of texts, either oral or written. We may think of such texts as instances of social meaning, as products of a continuous process of choices (Halliday, 1985). In considering both the contexts in which the teachers and students move and the texts which are available to them, this report attempts to portray the communicative setting in which learning takes place.

Contexts

Community

The students attending the two schools in this study are drawn from numerous villages, some close to the location of the schools and others distant, as far as 150 kilometers away. Both schools are situated on the periphery of the resident community, almost as if the 'home' village does not wish to be seen as claiming responsibility for the institution, and it was the perception of several of the teachers that the local community would have preferred a boarding school to have been built further away from the village than the existing day school. The three kilometers between one of the schools and the closest edge of the village means that some students must leave home at 6.00am to reach school in time for the morning Assembly at 6.50am. For those students who participate in after-school sports, it could well be 6.00pm by the time they return to their home or lodging.

The schools in this study are easily accessible by road although they are more than five hours drive from the capital city. The villages in which the schools are located are rural in the sense that the residents are dependent largely on the land; in one of the villages, the tourist industry is significant both as a means of income and as a means of broadening horizons. The latter village has access to mains electricity and boasts a public library. Neither of the villages can be regarded as isolated, and conversations with the students revealed extensive awareness of life beyond the village. However, both villages may be described as 'distant' from the centralized decision-making sites of the capital and other urban areas; in one village, there was only one public telephone (which more often than not was 'out of order') and no telephone at the school, and the daily government newspaper generally took two days to reach the villages.

Within each community exists a number of ethnic groups and a variety of spoken languages. The official languages of the country, Setswana and English, may be employed for official transactions but are rarely used in these villages as a communicative medium except in the classroom or between members of different

groups. English is the medium of instruction in upper primary and secondary classrooms, but is heard only rarely elsewhere.

Family

While the expansion of the junior secondary school system has greatly extended the accessibility of secondary schooling to Batswana students, the actual location of the junior secondary schools demands that many students leave their home villages to attend school. They may stay with or near members of their extended family or they may live on their own near the school to which they have been admitted. Of the students interviewed in this study, it was unusual to find a student living with both parents. In some cases, it appeared that the mother had moved to the school community when the child entered primary school; in other cases, the student had left parents and siblings to stay with relatives in the school community. In one instance, an eighteen year old student was living on her own, having come to the community because it offered a place in the junior secondary school, unlike the community in which her parents resided in which the schools were 'all full'.

Many of the students in these schools have brothers, sisters or cousins attending secondary schools elsewhere and they have formed their own preferences for where they would like to continue their schooling. Almost all of the students with whom we talked expressed hopes for schooling beyond the junior secondary level and some talked about going to the University of Botswana.

Most of these students belong to the first generation in their families to attend secondary school. This means that the senior family members with whom they live during the school year have not, themselves, experienced the kinds of happenings which constitute life at school nor are they familiar with the kinds of performance requisite for success in school. Thus, while the parents and grandparents may hope for the student's success, they are unlikely to be able to provide any practical assistance with studies at school. Moreover, not all the parents of the students are able to speak English or read and write. Such features of the students' families likely contribute to the perceived separation of school and community, particularly when students' and parents' hopes are not realized at examination time and teachers are subjected to criticism.

We asked the students whether there were books in the place where they stayed or at their home. While most of the students responded 'Yes' to this question, it seemed that the selection of books was extremely limited, - they could list them easily. And many of the titles were recognizable as current or former texts in the secondary schools.

- Int. Are you reading a book at home now ?
 St. At home? Yes.
 Int. What are you reading?
 St. I read "Agriculture for the Form 3's".
 Int. Where did you get that ?
 St. My uncle was attending school and it was one of his books.

- Int. Do you have any books where you stay ?
 St. Yes.
 Int. What are your favorite books ?
 St. "The History of Botswana". It belongs to my uncle.

- Int. What kind of books do you read at your home ?
 St. I read my notes.
 Int. Schoolbooks ?
 St. Yes.

Among the titles identified by other students were "The Great Ponds", "The Pearl", "Things Fall Apart", "Adventures of Tom Sawyer", and "Shaka", all of which were assigned texts in the previous English program.

School

The junior secondary schools built since 1986 have a common design and it would be easy to assume that the school context is the same for these institutions. But, it is people and not buildings that constitute the context, people whose interests and expectations give shape to the pattern of interactions within the school.

It has been the policy of the Ministry of Education not to place trained teachers in their home districts, and so the staff of the secondary schools are frequently strangers in the school's community and unable to converse in the local language.

Housing for the teachers is often inadequate or unavailable near to the school; the teachers in this study were sharing single accommodation between two and even three people. Individuals with very little in common besides the location of their place of work are compelled to live under the same roof. Moreover, the location of the schools on the outskirts of the village is a deterrent to easy access to village activities. This unsatisfactory situation has tremendous impact on the perspectives of the individuals teaching in the school towards their work. The sense of not belonging (or even a sense of alienation) influences teachers' expectations for themselves within the school and the contributions they will make in that context. This was revealed in teachers' daily routines which did not include regular attendance at Assembly, preparing lessons and marking in the staffroom, extracurricular activities with students in the lunch-hour or after school, nor supervision outside scheduled classes. While the commitment and example of a conscientious Headmaster may lead to the provision of an administrative framework in which the 'job gets done', which was the case in one of the schools in this study, this did not compensate for the lack of enthusiasm displayed by many of the teachers for the task at hand. Teachers were not reticent to voice their opinions that their work in the school was not supported by the community: one of the principal concerns was the lack of communication with the parents.

Curricular

A restructuring of the syllabi in the various subject areas has been taking place since the introduction of the transitional two year program leading up to the Junior Certificate (JC) examination in 1986. The differing degrees and stages of revision from subject to subject has been a source of considerable confusion and frustration for teachers. Revision of the English language program has followed the changes in the other subjects, and was in its first year of implementation across the country during this particular study.

The intended changes for the teaching and learning of English are perhaps more radical than the planned changes in other subject areas with the exception of, perhaps, Social Studies. Instead of focussing primarily on learning and practising the rules of the

language, it is intended that teachers and students will now practise the use of the language in a variety of communicative dimensions, in which writing, reading and listening play prominent roles. The goal is to develop fluency in communicating in English, both inside the classroom and beyond it (Ministry of Education, 1989; Nesbitt, 1990).

Prior to national implementation, the new English course was piloted in ten schools which included the two in this study. A description of the intents of the course was sent to the headmasters of the schools and a series of workshops for the English teachers was held to introduce the materials and teaching methods. A teacher who had attended some of these workshops from one of the schools in this study was no longer teaching English but had been shifted by the headmaster into Social Studies, and all the English classes had been scheduled to be taught by either a Peace Corps teacher (first year in the country) or the headmaster. Since the headmaster had been away on sick leave since the beginning of term, the expatriate teacher was teaching four of the five classes in the school and, during the period of this study, one of the Form Two classes was not receiving any instruction in English. In the second school, three teachers had attended the early workshops; of these, the expatriate teacher had now left and the senior teacher (now head of the English department) had temporarily relinquished her English classes to a student teacher in the PGCE program. One of the other two English teachers, together with the head of department, had attended all of the workshops; the remaining teacher was in his first year in the school and country, having taught previously in Zambia.

Classroom

The traditional arrangement of desks in rows, facing the front of the classroom, prevails in a majority of secondary classrooms in Botswana. Sometimes the rows are pushed together, but this seems to hold little pedagogical significance. For the most part, students work in isolation from their peers; only in exceptional classrooms is explicit recognition given to cooperative learning (Rowell, 1990).

The new English program sets out to promote the practice of communicative skills through interactions between students and teachers. There are specific sections of the program identified as 'group' work, which require that students work in group arrangements to facilitate the sharing of materials and the oral exchange of ideas; it is intended that students talk to each other in English! In these two schools, one had apparently tried and dispensed with the group arrangement of desks, on the grounds that it caused too much disruption to be constantly rearranging the desks for different subject lessons; and in the other school, while the desks in all the classrooms were arranged in clusters of four, five or six, students were permitted to speak to one another only very rarely. It was apparent that teachers were aware of the move to introduce group work into lessons, since there are a number of references to this during lessons in a variety of subject areas, but it seldom resulted in genuinely collective activities. For example, prior to carrying out a lab. activity in a science lesson, the teacher said "You must work it out as members of the group. Only the person taking the recordings should have a notebook out". There were eight students in the group near me, too large a number for all to contribute to the discussion and proceedings. During an English lesson, the teacher directed the students to work in pairs;

T: I tell you what, for the group exercise I just want you to work with a partner, one partner. O.K. ?

Some of the students clustered in groups of three were rearranged by the teacher into pairs and the students worked silently with their heads down.

T: How can you work with a partner if you don't discuss ? S... and B..., you are working together!

S: She is refusing.

T: You are not marrying one another; you are working together! The rest of you, just let me know if your partner is refusing.

After a few minutes have elapsed, it is obvious that the situation has not improved and that students are still working individually.

T: O.K. Move back to your seat. so we can discuss this.

What is the idea of working in pairs ?

S: To exchange ideas.

T: Right!

Texts

Oral texts

Reported observations of oral contributions and exchanges in classrooms of other schools (Prophet and Rowell, 1990; Rowell, 1990) indicated a high level of teacher-direction in the majority of lessons, and this was a feature of the lessons in these two schools as well. With the introduction of the new English program, designed specifically to encourage communicative skills, we looked at the types of oral texts contributed by teachers and students during the lessons. In the sense that these examples of spoken language constitute the principal, if not only, examples of these kinds of texts in English available to the students in these schools, it may be useful to arbitrarily categorize them as introductory, explanatory, directional, admonishing and so on according to the functions for which they are being used although there is not always a clear distinction between the categories

Introductory

The following examples are typical introductions to lessons in these schools; the teacher either announces the topic (as in the Home Economics lesson) or identifies the exercise or worksheet to be used by the students. Little or no attempt is made to link the topic with the ideas of previous lessons or with the world outside school.

T: *Today, we are going to look at cereals.*

How do you define cereals?

S: (inaudible)

S: (inaudible)

S: *Cereals are from crops you cross.*

T: *Right. Cereals are edible seeds of cultivated grasses.*

It seems to be the subject areas in which the teachers and students are provided with the most comprehensive working materials (English, Maths and Science) that the introductory oral texts have been reduced to instructions without any clues to context.

T: *O.K. You have a new assignment today. First, I'm going to come around to look at your assignment from last week, Writing C. And another announcement, for those of you who are behind. I will be on duty next week so I will be in the library during Study Period. Do you understand that? All next week from Monday to Friday. Are we clear? Open your books! Open your books. I'm coming round to check. Where are your books? Why are you just now getting them out?*

Explanatory

In all the records of many hours of teacher talk in these two schools, it is difficult to find explanatory text other than that used to explicate the meaning of specific words.

- T: *What do you understand by 'paddling the legs in the air'? What does his word mean? Is there anyone who can demonstrate it? How will the legs go?*
 S: *Will march.*
 T: *Do you know how to keep a bicycle in movement?*
 S: *Yes!*
 T: *So the legs are normally suspended in the air, so they are padd[l]ing in the air.*

Directional

Perhaps the most familiar oral texts in English to students are the directional ones in which they are provided with instructions about how to proceed. In the following excerpt of an English lesson, the teacher begins the lesson with directions to the students to open their books, and this is followed by further directions. It is notable because the observer or even the inattentive student has almost no clues to what the teacher is intending to accomplish in terms of learning.

T: *Please turn to page 22 of the student book.*
 Walking round the classroom, the teacher handed out the small paperback entitled Oil, one to each student.

T: *You are going to read from page 36 to 37, a continuation of where we left off.*

The students settled down (it was the last lesson before lunch) and after about five minutes of relatively quiet reading, the teacher announced;

T: *When you have finished, do Reading B, page 22.*

A further ten minutes elapsed as the students worked on the comprehension passage in their workbook, and then the teacher said

T: *Could you close your books now; we're going to do something different for a while.*

During the science lesson below, the teacher gives fairly lengthy directions, accompanied by a description of what to expect; what was missing was a check for understanding of the word 'flammable', without which the reasons for the instructions would not be clear.

T: And they [reading from the science worksheet] are saying "As you know, methylated spirits is very flammable, so you must be careful not to spill any near or on the bench". Also be careful not to point them of the test-tube towards anybody or to look into the mouth of the test-tube because the mixture will shoot out. Now, those are some of the precautions we are going to take to do the experiment.....So you must be having this [holds up a test-tube holder and pauses while everyone turns their attention to him], a test-tube holder. Once you see the mixture boiling and about to spill, you take it out of the waterbath. then it will stop shooting out, right ? [some comments in Setswana].

Admonishing

Some teachers offered frequent and extensive oral text admonishing the students for their failure to complete the teacher-assigned exercises. The possibility of not passing the examination just a few months away and the bleak consequences of such an event loomed large in many of the reprimands.

T: You waste a lot of time because you don't know what you are doing. I saw some people yesterday; they were there not knowing what to do. But the instructions are there on the worksheet. So today, I want people to read those instructions clearly, and make sure you understand those instructions clearly before you begin to do anything. So after that, I don't want to see anybody sitting or standing not knowing what to do.

T: Another warning for those who don't finish my work. Don't think that you are going to punish me, because I know that it is not me who is going to write the exam, it is you. And you are going to fail the exam. I know that you are saying that I always beat you, but it is good for you. You will be sorry next year.

Students' talking

As in previous observations of Botswana classrooms, students were provided with few opportunities to articulate their thinking. But, in a few instances, students did succeed in raising some questions. In the first excerpt below, the teacher actually encourages the student to elaborate on his reasoning, an exceptional occurrence in these classrooms. The second excerpt illustrates the difficulties confronting the student who makes a genuine inquiry. The teacher interprets the student's question as asking where to obtain the oyster shells for the chickens when it appears that what the student really wanted to know was where the oysters came from.

S: Can the rotational grazing help to control by breaking the life cycle of the tick?

T: A very good point! Would you be right or wrong to say that rotational grazing is a preventative measure?

S: Because in rotational grazing, the ticks will die. [Student gives extensive account of tick life cycle].

T: Very good thinking, Robert!

S: If you buy some layers and you find they are laying and producing soft egg shells, and you want their eggs to be strong, and even if you go by the riverside and you find the place to catch them, if they are not there ?

T: *Even if you go by the riverside where you catch them. So, we are at a disadvantage, because we normally don't find the oysters around here. So the oysters are normally packaged, in any shop that is selling the poultry products. So you can buy them from that shop. Because that is some feed for the chickens.. That is one way we can try to solve this problem, the mineral deficient [sic]. So normally you have to buy it to be on the safe side. Have you ever seen an oyster shell around here ?*

S: *No.*

T: *So an oyster is a sea creature.O.K. You know a shell ?*

Ss: *Yes.*

T: *You know the crab ? What do you call it ? You call it.[Sesubye name].?*

Ss: *Yes.*

T: *But that is not an oyster. So oysters are not in the river.*

S: *The oyster shell which you use is the one found by the sea ?*

T: *Yes, you don't have to do anything.*

S: *Do you add that piece from the oyster shell to the layers mash?*

Print texts

In the description of the students' family context above, the very limited access to print texts outside the school was noted. In this section, the availability, accessibility and function of print texts within the school is examined.

Textbooks

In many of the subject areas, the revision of the curriculum has preceded the provision of appropriate textbooks. In the classrooms in this study, textbooks were used regularly in the Math and Setswana lessons. The two Math texts provided the exercises constituting the body of the course. In Science, Social Studies and Agriculture, there were some texts from the previous programs; but since these do not support the framework of the current curriculum, teachers used them rarely or not at all. Another reason for their infrequent use is that there is seldom a class set of these texts, and students must share them. Only very occasionally were students given a reading assignment in class or for homework. Moreover, teachers themselves appeared to do very little reading in course-related textbooks and apart from the isolated text from university or college programs, there were remarkably few textbooks or reference books in the staffrooms.

The print materials for the 'new' English course had been introduced in these two schools on a trial basis during the last two years.. There is a students' course (text) book for each of the six terms in the two year program. Each student text consists of a series of exercises directed towards the development of specific skills such as reading, speaking, listening, and writing. The frameworks for these exercises are derived from a wide variety of subject areas (Science, Social Studies, Astronomy, etc) In addition, there are sections labelled as Study Skills, the aim of which is to complement the development of language skills through the use of language-dependent strategies such as dictionary and encyclopedia use and note - taking.

Reference books

Each student is supposed to have a dictionary and it certainly seemed that, unlike in some other schools visited, the students here not only were in possession of dictionaries but also made frequent use of them. Encyclopedias are intended to be

used as a component of the English program, but the number of these in each school seems limiting for the purpose intended for them. One school had a total of 15 and the other school had only six. The 15 encyclopedias were stored in the locked library of one school, and in the staffroom of the second school. Additional reference texts were also in the locked library, such as Children's Britannica, Vol. 1-20, and Macmillan's Children's Encyclopedia, Vol 1-14. The second school appeared not to have any collection of other reference books. Students indicated that they had, on occasion, been allowed to borrow books from the locked library but this had not happened during this current term (Term Two).

Fiction

In order to provide the students with frequent contact with the language, an intended component of the new English program is a class library or book box of about 90 graded readers from which students will read about 'five or six titles' each term. Individual, silent reading is to be a regular activity within the English lessons. In the two schools which are the subject of this study, both of which were in their second year of the new program, these book boxes had not been made available. The Headmasters and teachers claimed no knowledge of them. Moreover, the set literature texts of the former program had been placed in storage, with the result that the students had no class contact with any complete accounts in English literature.

In one of the schools, the library was in continuous use as a classroom and there were no books on the shelves. In the other school, the library was kept locked except when the English teacher took groups in there for class work. There was a small collection of paperback fiction (about 70-80 different titles) which could possibly have been the survivors of a book box. In addition, there were about 25 novels and biographies such as *Selected Tales* (D. H. Lawrence), *Of Mice and Men* (John Steinbeck), *The Time Machine* (H.G.Wells) and *My early Years* (Charles Chaplin).

Nonfiction

The new English program uses a series of short, softcover nonfiction accounts as the basis for some of the students' classwork in the English program. For Form One, titles include The World under the Sea and Water; in Form Two, Oil. In one of the schools, there was a small number of nonfiction titles kept in the locked library; among these were *The World under the Sea* (7 copies), *Water* (31 copies), some science, mathematics and language texts.

Posters/displays

There were relatively few wall posters in these two schools and these displayed limited text. In one of the science rooms, there were four posters pinned to the back wall; a colored map of Africa showing the migratory routes of birds and entitled **Flying Visitors**, a drawing of male and female students and the print message **AIDS is a teenage problem, too**, and a **Commonwealth Day, March 1990** portraying children from many nations. A Macmillan Boleswa 1990 calendar completed the set. In the entrance to each of the schools was an attractive poster displaying a particular issue of stamps.

Miscellaneous print texts

Occasionally, students received printed handouts from the teacher to supplement the classroom activities. These tended to be some form of notes which the

teacher felt were necessary for an adequate preparation for the JC examination and which contained information not readily available to the students in any of the course materials. An example of this kind of text (Appendix 1) is the summary which a teacher distributed at the close of three periods of lecture on the Organization of African States and prior to the writing of a one page composition on the OAU by the students [see below for description of this homework]. The teacher remarked;

This is a summary of the OAU; you will put it where you like.....staple it to your notebooks, eat it, do what you like! I will read it and make any changes necessary.

He read it aloud to the class, without making any changes, and concluded

Right, that is a summary. You can write 12 pages!

Newspapers appeared to be rare commodities in these particular schools. Students were seldom observed reading them, and even in the staffrooms, the editions which appeared were very dated. In one of the staffrooms, a Time magazine was seized upon enthusiastically by teachers in their spare periods. Catalogues from distribution centres in South Africa were much more likely to be found than current newspapers or newsmagazines.

Written texts

One of the universal features of formal schooling is that teachers and students spend some of the time engaged in the process of writing. But what kinds of writing and for what purposes?

Teachers' writing on the chalkboard

There did not appear to be any consistent pattern in the use of the chalkboard; some teachers scarcely touched it while others covered it during the course of a lesson. Perhaps its most regular use occurred during maths lessons and it was least often used in Setswana lessons. Teachers used writing on the board for the presentation of information, sequencing instructions and illustrating relationships.

(i) presenting information

The use of the board for this purpose occurred more frequently in the subject areas which do not have student worksheets or (what the teachers consider to be) appropriate textbooks. There was considerable variation in the completeness of the information provided. The provision of detailed notes seemed to be a feature of Home Economics, Agriculture and sometimes Social Studies. But as can be seen from the examples, what appears on the surface to be a comprehensive collection of informative points is actually a collection of labels requiring further elaboration and interpretation for the construction of meaning. In the two examples below, one can imagine what the student preparing for an examination might remember if he/she succeeds in memorizing the teacher's notes, but what links or explanations might the student be able to assemble?

Cereals are the staple food for many nations

1. produced in large quantities
2. they grow easily
3. they are a good supply of carbohydrate

Nutritive value

1. cellulose- from the bran
2. starch- endosperm
3. protein and fat- germ
4. phosphorus + iron- bran
5. vitamin B group eg. thiamin, niacin
6. vitamin A eg. yellow mealie

During the Agriculture lesson from which the next excerpt is taken, the teacher spent 80 minutes in a question and answer routine during which he wrote isolated words on the board. Again, one might ask about the kinds of connections students are likely to make when they read these notes in several months time, and whether or not they will be able to make sense of the words.

Diseases of Beef Animals

= selling + profit

-diseases

-lack of capital to buy feeds

Ranching or commercial system

-water

BACTERIAL disease

BACTERIA

eg. T.B.

Mastitis

Botulism

Anthrax

FUNGAL diseases

eg. ringworm

VIRAL disease

eg. foot and mouth diseases
rindepest

The lesson in which the following information was written on the board was not observed, but presumably these notes were copied down by the students for memorization on the next unit test.

1. (i) *Intestinal Infectious Diseases (Dierrha)*[sic]

(ii) *A person passes watery faces* [sic]

2. a) *Drinking contaminated water* b) *Eating contaminated food*

*boiling water, adding chemicals to water, storing water properly,
cooking food properly, sterilizing baby bottles, covering food.*

(ii) *directional*

Written instructions to the students were unusual, particularly if they persisted beyond the duration of the immediate lesson. The following instructions were written on one side of the board and were left there for a couple of days [and these were accompanied by the teacher's typed summary, Appendix 1]:

Write a composition of about one page about OAU.

State the following:

when it was founded

where it was founded

the membership

form of meetings

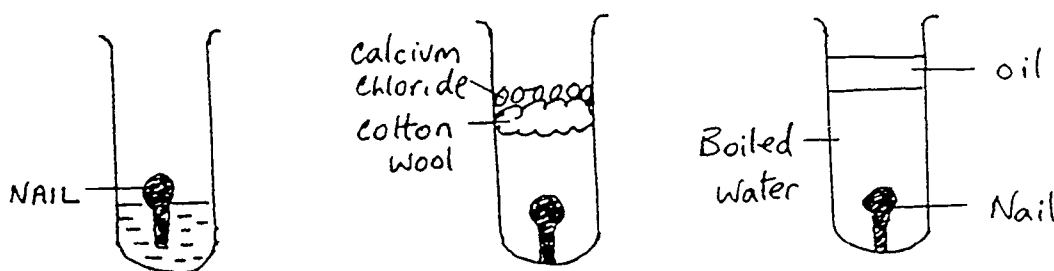
some successes
some problems

In the next example, the teacher used his writing on the board to provide instructions for the entire sequence of activities that day. The teacher was already in the science classroom when the Form Two class entered. They settled themselves very quietly around the large tables and waited expectantly. Without any words of greeting, the teacher started to write on the board and the students began to copy this into their notebooks. The teacher's writing and diagrams were exceptionally neat.

OXIDATION OF METALS

Rusting (slow oxidation)

SET UP THE FOLLOWING EXPERIMENTS



T. Now I would like three members of each group to set up those experiments, and we will put them aside. The rest of the class must help in setting up those experiments.

The teacher returned to writing on the board while the students continued copying into their notebooks.

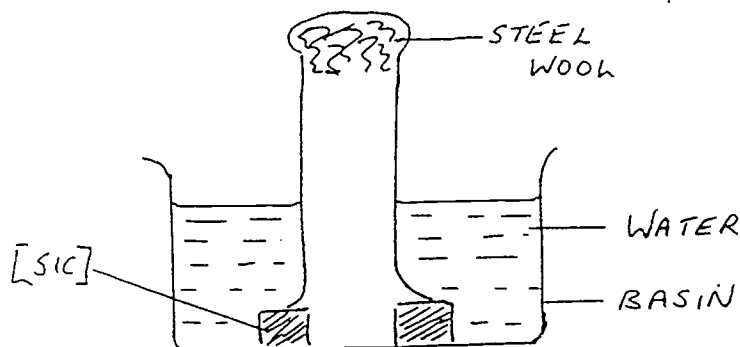
- a) *In which test tubes does the iron nail rust?*
- b) *What is the use of the calcium chloride?*
- c) *Why is water in the tube boiled?*
- d) *Why is the water covered with a layer of oil in tube C?*
- v)[sic] *What conditions are necessary for rusting to take place?*

Leaving the front of the room, the teacher walked around the tables to check on the students' work.

T. Why do you have to do very tiny drawings when I have drawn big diagrams on the board? And write down the questions; make sure you leave a space.

The teacher then returned to the board and drew another diagram.

SET UP THIS EXPERIMENT



No further directions nor explanations were provided by the teacher.

(iii) focussing

Many teachers wrote headings or partial notes on the board as a focussing technique. While this was most common at the beginning of lessons, there were teachers who would sustain this throughout the lesson. The students rarely took the opportunity to check or correct the notes made in previous lessons. As with the blackboard notes, these fragmented items rarely were capable of 'standing on their own'.

HOW DOES SADCC WORK?

1. SUMMIT OF HEADS OF STATES

*Meets- once- Botswana- Chairman
policy*

2. Council of Ministers

Finance Minister

3. Secretariat [sic]- Zimbabwe

In a subsequent lesson two days later, the students were presented with a review of data on the Organisation for African Unity (OAU). Below is a sample of the teacher's written board notes used primarily for focussing (although in this case, some students were copying them, having made the connection between this particular review and the essay assignment listed at the side of the board).

Policy

1. Assembly of Head of States

-2 years- Mubarek- Egypt

2. Council of Ministers- foreign

external

3. Secretariat- clerical work

Salim Ahmed Salim- Tanzania

4. Commission- LIBERATION- ANC, PAC
Mediation

Conciliation[sic] and arbitration.

At the beginning of the agriculture lesson below, the teacher commented on the fact that they had finished Term 2 work except for some revision. He cautioned the students to be "very serious" about the exam to be written in three weeks time since "it has been sent by the Ministry of Education and you should regard it as a mock JC exam". The teacher used the whole lesson for a question and answer review of 'RAISING LAYERS', with focussing notes on the board, as exemplified in this excerpt:

The teacher commented that high egg production occurs in the summer when there is a longer day length and low egg production is in the winter when day length is short. He wrote on the board;

EFFECTS OF LIGHT ON EGG PRODUCTION

1. Encourages production. with [sic] are responsible for egg production eg.(1) follicle stimulating hormone -- development of ovaries.
(2) Luteinising hormone -- encourages ovulation

2. Longer day length gives chickens more time to feed.

The teacher then asked "Any questions?"

There was no response from the students.

Teacher: "So you think you're alright on the question of light?"

Still no response from the students. Given the highly technical language being used by the teacher in this focussing text, once again the question arises as to what sense the students are making of words such as hormone, luteinising and follicle and, in particular, what the relationships of these are to the effect of light on egg production.

(iv) explanatory

Extensive explanations were rarely given in conjunction with blackboard use. Mathematics teachers tended to avail themselves of this opportunity to a variable degree of success. One outstanding teacher used the board to illustrate the steps he was taking as he 'thought' aloud, drawing arrows to show the mental links he was using and inserting the numbers needed for the computation. For each example that he explained, he began with the question "You ask yourself the question 'What do I do to this term to get here?'"

$$3 \times \left(\begin{array}{l} 15 : 5 = a : 15 \\ a : 15 \end{array} \right) 3$$

T: Now try this one. Lets do this together.

$$5:15 = 3:x$$

Giving a detailed oral explanation of what he had to do to get '3', the teacher wrote on the board:

$$\begin{array}{l} 5:15 \\ 3:x \end{array} \times \frac{3}{5}$$

T: And then we can check it

Teachers' Writing elsewhere

(i) correcting student work

During the period of these observations, correction of students' written work consisted almost entirely of checking off with a tick if the work was acceptable or marking with a cross or a line through responses which the teacher considered unacceptable. There did not appear to be any practice of the teacher writing corrected words, phrases or examples in students' workbooks or on tests. In the following samples of marked questions from a science test, the student receives little feedback as to why the answer is considered incorrect:

Q: What is corrosion ?

A: *When two chemicals reacts together*

Marked with a cross (incorrect)

Q: What can one see after some days, when car battery acid is spilled on a piece of paper ?

A: *The paper is burnt by cutted into small pieces*

Marked with a cross (incorrect)

Q: What should be done if a car battery acid is split[sic] on a table ?

A: *You must rub it with a cloth which is wet and a dilute alkaline*

The teacher crossed out *dilute* and wrote in 'weak'; marked with a tick (correct)

(ii) test answers

Occasionally, teachers would provide samples of the required answers to test questions by posting these in the classroom; one example of this was found in a science laboratory at one of the schools (see Appendix 2).

(iii) lesson preparation

Teachers were rarely, if ever, observed writing lesson plans or making notes in preparation for teaching. Some teachers appeared to be working through the set exercises, and others had personal notes from courses which they had taken as students.

Students' writing

(i) on chalkboard

It was not uncommon for teachers to ask the students to write on the board during a lesson. Students were expected to illustrate their working of a problem in mathematics, provide a list of items in agriculture or fill in individual words requested by the teacher. Less frequently, students were invited to share more extensive and

self-constructed pieces of writing. In one Social Studies class, taught by a teacher originally scheduled to teach the pilot English program, students were asked to write their individually composed paragraphs on the board for discussion with the rest of the class. The 'discussion' became more of a teacher correcting exercise with students inattentive and unaware of the potential value of the activity. The lesson began with the teacher referring to the fact that in yesterday's lesson, he had told them how to write an essay in Social Studies. After some unproductive attempts to get the students to read out their paragraphs, the teacher asked for volunteers to write samples on the board.

T: Anyone of you? We have discussed the lack of manpower and storage facilities.

A girl walks up to the board from her desk at the back of the classroom and begins writing.

Lack of capital

Lack of capital is a problem in Botswana because most of the farmers are poor. So they can not afford to buy equipments[sic] which are needed. Also they can not grow crops on a large scale. Sometimes the crops can be attacked by diseases. this results in low yields because farmers can not be able to buy chemical[sic] to control them.

T: Why don't we put it this way ?

The teacher wrote on the board;

Lack of capital is one of the problems facing arable farmers in Botswana. Most of the farmers in Botswana are poor and do not have enough money to purchase agric. equipments. They cannot also be able to buy fertilizers to fertilize the soil. More over farmers fear to borrow money from the bank because they are afraid of failing to pay back the money.

Turning to the class, the teacher continued orally;

T: All these factors contribute to the low production in Botswana.

Reading the student's paragraph from the board, he remarked;

T: I discourage you from starting sentence with 'also'.

He then changed the student's written *crops on a large scale* to *crops at a large scale*, and commented;

T: Your points are alright.

Another girl came up to the board and began writing;

Lack of marketing- most farmers would not plough because they will be no way to market their crop

The teacher intervened;

T: I would like you not to use 'would'; you can use 'can'.

The student changed the statement above to

Even if they can plough they can produce little to avoid waste.

The teacher asked;

T: Can you tell me how the government is trying to solve this problem of lack of market ?

Before an answer was provided, the teacher changed the writing on the board to

Most farmers can not plough more crops because
and paused.

(ii) dictated notes

The dictation of notes to students was not a common practice in the observed classrooms. The following observations were made in a Form Two class being taught by a University of Botswana graduate prior to his PGDE training. The student teacher came to the class with several pages of detailed notes on international agencies and spent the entire 40 minute period dictating them at such a rate that I had difficulty keeping up with him. Not only was the pace of the dictation unrealistic but the level of vocabulary was far beyond most of the students in the class. The regular teacher for this lesson was not present.

General Assembly

All the 154 member states have equal voting rights. It meets once a year. Its work is to debate on international issues, to pass resolutions on political problems

Student interrupts: "What ?"

as well as to make recommendations to the Security Council. Furthermore, it elects non - permanent members of the Security Council. A quarter of the members of the UN are from the Africa, and Botswana is one of them.

At the table near me, one of the boys gave up writing; it was just too fast for him and he missing too much for it to make any sense. Another boy pulled out a rotebook from under his desk top, and seemed to be following the dictated notes in it. After the end of the class, I asked the student where he had obtained the notes and he replied "Primary school!"

(iii) notes

In the classrooms observed in this study, students rarely made their own notes ; they relied on those provided by the teachers (see above). As part of the new English program, however, opportunities to practise this skill are built into the listening passages. As the teacher reads the assigned passage, students are encouraged to write down key words and phrases which will help them to answer the questions about the content of the passage after the reading is finished. On the occasions when this type of exercise was observed during this study, many students had become 'question- wise', and were listening to the passage with the questions open in front of them, and indeed trying to complete their responses. In Appendix 3, an example is provided of one student's notes made as he listened to a passage about tobacco.

(iv) worksheets

The Science course in the junior secondary program consists of a series of worksheets divided into discrete units according to the focussed theme. Each worksheet contains directions for student activities and a number of follow-up questions intended to summarize the principal ideas associated with the the lab activity. Completion of these questions is the top priority for both teachers and students since the worksheets are seen as the principal resource for preparation for the examination. As has been noted in previous observations (Rowell and Prophet, 1990) students will frequently wait for the teacher to dictate the 'correct' answer before they complete their worksheet. But sometimes the students do construct their own answers, as seen below;

Q: Describe the water cycle.

A: *The water comes from the earth by rainfall. when it is more sunny the water evaporates by atmosphere to the earth again and go and form water again.
The trees are germinating or growing well when the rain is raining every day.*

Q: Who are the largest consumers of water in Botswana?

A: *The largest consumers of water in Botswana are rivers and dams.*

Q: Who are the smallest consumers of water in Botswana?

A: *the smallest consumers of water in Botswana are boreholes and taps.*

It is apparent that this student is in the process of constructing meanings in this text, although the meaning for the word 'consumer' is perhaps not the meaning commonly accepted. Since this worksheet may not be corrected by the teacher, will this student have an opportunity to recognise that her interpretation will not be productive?

Opportunities are provided for students to construct explanatory paragraphs as part of the science worksheets; for example, in a section on the hardness of water, the following assignment occurs:

HOMEWORK

1. With the help of the following words: rain water, carbon dioxide, limestone, describe how hard water is caused. (If possible, read more about hard and soft water in the library before writing your description).

In an observed lesson, this assignment was introduced in the following manner:

T: Now you should be able to do the assignment on page 40. [Reading from the worksheet] Carbon dioxide in the air dissolves in the water and when this water contacts the rocks the dissolved carbon dioxide causes some of the limestone to dissolve. What term do we use in the lab?

S: It will eat up the mineral.

Laughter

S: It will cross the mineral.

T: We will call you that name!

S: The acid will corrode the mineral.

T: You will write about this in your own words, and after writing it, you will bring it to me.

However, immediately following these instructions, the teacher proceeded to give directions for a lab. activity to be carried out during the lesson and no further reference was made to this paragraph.

While the student workbooks in the English program are not really worksheets in the same sense as the science worksheets, there did seem to be a tendency to treat them as such. An example of an English lesson using the materials provided is given in Appendix 5.

(v) paragraphs and/or essays

In retrospect, it seems remarkable that so few examples of students' writing in the form of paragraphs or essays were observed during the period of this study, although a similar pattern has been observed in other schools. Teachers seem to believe that

students are not capable of expressing themselves in this manner in English. One English teacher said that, because the students come to the school with a 'very low level' of English, they begin with learning how to write sentences; but, she pointed out, by Term Two of Form One the students are expected to write paragraphs in Social Studies, 'which they can't do'. The writing of a paragraph seemed to be presenting severe difficulties for one Form Two class, but there was little in the way of assistance provided by the teacher.

An example of the process of writing and revising the writing in the context of an English lesson is shown in Appendix 6.

(vi) tests and examinations

Regular unit tests were a feature in all subjects in these schools. It is probably fair to say that most of the writing that students did in school occurred during these activities.

Discussion

In this study, I have illustrated some of the texts and contexts resulting from and contributing to the communications of students and teachers in two schools piloting a new English course of studies. Of particular interest is how these social transactions mediate learning through various modes of language. It is possible to make interpretations along several dimensions which may be useful to teachers and administrators by considering what messages are being communicated by the participants in classroom and school interactions, to what extent are communications contributing to sense - making and how language is integral to learning.

Communicating messages

As the students and teachers in these two schools interact, they are communicating in both explicit and implicit ways. The excerpts provided in the body of this report illustrate this. Explicit messages are transmitted to students during directional and admonishing teacher talk, telling them what the tasks at hand are and what the consequences of not completing those tasks will be. Classroom organization sustains the dominance of teacher talk, even when this is minimal and when the physical arrangement of desks might be expected to encourage student - student interaction; student - initiated talk is rare. The 'content' of lessons is invariably what has been laid out in text book exercises, worksheets, workbooks or teacher guides. So what implicit messages about learning and teaching are propagated by the social transactions in the schools?

Students recognize that to be considered good students, they must be able to provide teacher - designated answers to questions. Such answers have almost certainly constituted part of the teacher's information during lessons and so it becomes important to be able to retain and recall this information and hopefully recognize it at the appropriate moment. Teachers uphold this message by calling on those students in the class most likely to accomplish this. A related message is that the completion of exercises is more important than the thinking which goes into the exercises. The quality of the responses in many of the exercises seemed unimportant as long as there was something written down. Learning comes to be seen as the acquisition of someone else's knowledge, out there, detached from the learner. It is seen as the means of accessing the information needed to pass the examination at the end of Form Two.

Most teachers in these schools saw their task as transmitting the information required to assist the students to pass the examination. The teacher attempted to develop conditions in which students accessed the information through listening, writing or, occasionally, reading. The teacher was generally satisfied if the students appeared to be on-task and there were no obvious disruptions. Cognitive engagement with the topic was not a necessity, and explanatory, diagnostic or remedial talk was rarely a feature of the classroom discourse. While many of the exercises comprising the new English program have the potential to lead into these kinds of talk, this almost never happened.

The teachers worked hard at transmitting the message about who was in control; as keepers of the knowledge which is important (ie. to pass the examination), they wore a cloak of authority which enabled them to largely ignore the students' knowledge. Situations which called for some recognition of the worth of students' ideas, such as might occur during group work, were strenuously avoided. In cases where the cloak was a little thin, the veneer of authority was maintained by physical means.

Making meaning through communicating

The students and teachers in this study move through a variety of contexts in which meaning is possible through social exchanges. The articulation of ideas through talking and writing, and the reformulation of these ideas upon response from others enable people to make links between what already makes sense to them and new information. By being cognitively engaged in these communicative activities, individuals build bridges between the different contexts which make up their world. While the intentions of the curriculum developers in providing classroom materials for both teachers and students include that of aiding the communicative processes, in many of the classrooms in this study the communicative framework for encouraging cognitive engagement is impoverished by the style of interaction. Even if, as in the new English program, "as much time as possible is spent in student activity rather than teacher talk," cognitive engagement is not guaranteed; and when teachers do little more than read the page number of the exercise as an introduction, it is not even encouraged! The students in these classes have learned how to handle the immediate situation by retaining and recalling fragments of information and moving these into (they hope) appropriate positions; very few bridges are being built between contexts.

It is probably not a coincidence that in these schools and others, student-initiated talk occurred more frequently in Agriculture classes and Social studies than in other subject areas. One could argue that the bridges between contexts have been made more apparent in these areas than, say, in Math. Students actively involved in trying to make sense of new information by linking it with sense already made from their biographical experiences are more confident to inquire. In the Agriculture classes, there are plentiful opportunities to recollect personal experiences tied in with personal knowledge. Much of what the students in these classrooms encounter does not readily tie in with existing personal knowledge; it is second hand in the sense that it is derived from other people's experiences. Thus it needs to be reconstructed by the learner in order for it to make sense and to obtain any meaning. This implies that students require opportunities to put the pieces together in their own way and in their own words, and in so doing, they come to recognize the connections. While this may be what is intended in the new English program, it is not what is happening when students copy sections of the provided text into their workbooks. D'Arcy (1989)

makes the distinction between reproducing and re-presenting in her discussion of how students come to shape meanings. The students in this study appeared to be aiming for reproducing or replicating information and there was very little opportunity offered to them for re-presenting what they had learned, not as a product but as a process. As D'Arcy points out, there is a mistaken assumption that if the handling of the medium for the re-presentations (writing, mathematical symbols, paint, garden, wood) is taught in a skill-based way, students will become competent writers, mathematicians, artists, gardeners, or carpenters. What has to happen is that the learner utilizes whatever medium that has been chosen not for its own sake, but meaningfully for the purposes of him/herself.

Language and Learning

Almost all the students and teachers in this study were using a second or even a third language for their work in school; for teachers and students alike, the English language presents a challenge. Teachers and administrators made frequent reference to the inadequacies of students' written and spoken English when they enter Form One. Teachers admonished students for not conversing in English. During or between lessons, yet English was certainly not the preferred language in the staffrooms. There was virtually no discussion about the difficulties facing teachers working in a second or third language nor about the adequacy of the teachers' written or spoken English. In communities distant from the urban areas, the opportunities to practise speaking and reading in English are almost as much a problem for the teachers as for the students. When one considers that the teachers' language, apart from being the medium for conveying information, is the principal resource from which students may learn to use English, it is surprising that it is not a central focus for attention. The breadth and depth of the teachers' repertoire in English is likely to be a significant factor in the development of language use and its contribution to learning. And by this is not meant the accuracy of spelling, the construction of sentences, etc., but rather the articulation of ideas in the process of communicating. There were only isolated instances of teacher's 'thinking' aloud or 'thinking' in writing and, given the paucity of reading materials accessible to the students, one wonders when and where the students would encounter examples of different functions of language in English. There were so few examples of teachers providing well constructed explanations in the lessons that students would scarcely recognize one if they saw or heard one, never mind begin to build one for themselves.

While the problems associated with working in second or third languages are both significant and substantial, this study suggests that awareness of the ways in which people come to learn is an even greater problem in these classrooms. As long as teachers rely on a transmission-of-information approach to teaching, students will be constrained by the imposed frameworks of other people's knowledge.

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Appendix 1

ORGANISATION OF AFRICAN UNITY-PAN-AFRICANISM

Pan-African feeling (the desire for a united Africa) has developed out of an awareness of African cultural unity, a desire to present a united front in world affairs and a wish to assist those still struggling for ~~freedom~~ freedom from colonial rule. Pan-African ideas began in the late nineteenth century and early twentieth centuries both in Africa and among black people in America. Several pan-African congresses were held between 1919 and 1945; the early congresses were moderate and mostly run by black Americans, but the last of these congresses held in Manchester in 1945 was more African-oriented (Nkrumah and Kenyatta were among the Africans who attended) and more radical, and called for an eventual union of independent African states.

In the late 1950s and early 1960s pan-Africanism became very important, largely thanks to Nkrumah. Pan-Africanism became more practical and more purely African but individual nationalism remained stronger than pan-Africanism and many mistrusted Nkrumah's ambition to lead a united Africa. Pan-African feeling culminated in the formation of the Organisation of African Unity (O.A.U.) in 1963, after a series of all-African People's Congresses which started with one in Accra in 1958. The OAU, which comprises an ASSEMBLY OF HEADS OF STATE, A COUNCIL OF MINISTERS, SEVERAL COMMISSIONS AND A PERMANENT SECRETARIAT, fell short of a fully united Africa which was Nkrumah's hope, but it has survived and has achieved much.

a) Some achievements of the OAU are as follows.

- It has supported liberation movements, helped to remove colonialism from the rest of Africa and guarded against neo-colonialism.
- It has served as a stabilising force, trying to mediate and encourage peace in serious crises (e.g. during the Biafra War).
- It has helped to prevent war by settling minor border disputes.
- It has provided regular contact between heads of state which has encouraged more inter-state cooperation.

b) Several weaknesses have prevented the OAU from achieving more:

- Individual nationalism has remained stronger than pan-Africanism, and all states have been unwilling to surrender real power.
- There have been serious differences of approach to world and African ~~issues~~ issues due to world powers interference i.e. America and Russia.
- There were also differences in language and approach inherited from the colonial period.
- The OAU has been hindered by lack of funds.
- There have been serious disputes between members (e.g. between Kenya and Somalia and Somalia and Ethiopia).
- After military coups many countries focused attention more on internal problems than on wider African affairs.

S.S. PRODUCTIONS.

Appendix 2

Sample answers for science test written by teacher and posted on bulletin board.

- Q: What is the function of the part of the cell labelled C ?
 A: To allow enterey of food and gases as well as letting them to move out.
 Keeps shape of the cell
- Q: Describe the relationship between the number of turns of wire and the load supported.
 A: More coils the stronger, the more load is picked

Appendix 3

Tobacco

Companies

People smoke

leaves of the tobacco plant

Zimbabwe

Guinea

- make - show weed - clear
- Plant - grow - eight week.
- seedling - transplanted - fields
- nourished - commercial - fertilizer.
- after 3 months - farmer pick leaves
- force - cut - bottom
- leaves - hung - bundled - dry - slowly
- tobacco - leaves - yellow - brown
- formation of nicotine
- smoke - tobacco - stimulate - nervous
- system.
- irritate lungs - cause cancer of
- the lung.

Appendix 4

English lesson, July 3, 1991.

- T: Good morning.
This morning we're going to read an interesting passage on Oil. We're going to look at how oil is obtained under the sea.
The exercise you're going to do after the reading is constructing questions. You are given the answers and you have to make the question for it. If it says "because", you are going to write ?
- S: "Why"
- T: Yes. And if it says (inaudible), you will write ?
- S: "How many"

Walking around the classroom, the teacher hands out a copy of the paperback Reader, Oil, to each student. The students are seated at desks arranged in groups of four, five or six.

T: Turn to page 31 in your Work[Course] Books. Reading B.

The students have opened their Student Books containing the instructions for the exercise (see below) and these in front of them as they read the set passage in the Reader (see below). There is silence as the student work individually. Some of the students appear to be filling in spaces in their workbook as they proceed with the reading. The teacher is sitting along side one of the student groups at the front of the room, also reading the passage and Work Book.

Thirty minutes into the lesson, and most of the students are writing. One student, previously observed having difficulties with dictation in a Social Studies lesson, is not writing anything; moreover, he appears to be reading a different set of pages from those assigned. I've seen only one student referring to her dictionary as she works, and she shares her findings with her neighbour. At the group next to me, there is some quiet discussion among four of the six boys about one of the exercise items. The very alert boy in the group has finished his construction of the questions, while the boy having difficulty has only just started.

An hour of the lesson has elapsed, and the teacher gets up from his chair at the front and walks around the room. He looks at one of the top students' work to see if she has finished, talks very briefly to three other students before returning to the front of the room.

- T: O.K. We haven't got much time left.
Stop writing. I want to go over Exercise A. I see many of you are mixing up Number 1. The answer there is "Because..."
I don't expect a single answer; there could be two or more. So what answer do you have ? Raise your hands.

The teacher leads the students through the exercise, asking students who are likely to give reasonable answers.

Passage from Reader entitled Oil

How do men search for oil under the sea?

Usually geologists first explore the bed of the sea. Men photograph the sea-bed with special cameras. The geologists study the photographs and make a geological map. Then they survey the sea-bed from boats.

The geologists work in small groups and each group explores a different part of the sea-bed. The men lower themselves from their boats into the water. They take down their geological instruments and lamps. When they reach the bottom, they shine their lamps and search for possible oil-bearing rocks. When a geologists finds some, he cuts off pieces. He takes the cuttings back to his boat. Later, he will examine the cuttings with scientific instruments; and he may decide to send some of them to a laboratory.

Student's Book (Form 2, Term 2, p. 31)

A. Group Work

Turn to page 19 in your workbook and read the short answers in Exercise A. Then skim the text for the information that you need to before you write it down.

- B. Read each of the following groups of words. Then skim paragraph 5 for the information you need in order to make a complete sentence. Use one word or phrase from each group, and write the sentences in the correct order on page 19 of your workbook.

next	geologists	make a geological map
finally	photographers	survey the seabed from boats
first	geologists	photograph the seabed
after that	geologists	explore the bed of the sea

- C. Skim paragraph 6. Then read the following notes. Put the notes in their proper order. Write your answers on page 20 of your Workbook.

take their geological inst.and lamps
 take cuttings back to boat
 lower themselves into the water
 examine cuttings with sci inst.
 search for oil bearing rock
 may send cuttings to lab
 work in small groups
 reach bottom and shine lamps
 find oil bearing rock, cut off pieces
 each group explores diff. part of seabed

- D. Oral Work (not done during observations)

Student writing for Sections A. and B.
 Work Book, page 19.

- B. Write your completed sentences in the correct order.

First geologist explore the bed of the sea. next photographers photograph the seabed. next after that geologist make a geological map. finally geologist survey the seabed from boat.

- C. Put the notes in their proper order.
Remember the Main Idea is: How geologists search for oil under the sea.
1. *Men lowers themselves into the water*
 2. *each group explode different part of seabed*
 3. *geologist search for oilbearing rock*
 4. *(not completed)*

Appendix 5

Student Workbooks in English, Form Two, Term 2:

- work attempted / completed (c) or not attempted (x).

The study took place in late June and early July, about half way through the term. Apparently the Term Two materials had not been delivered to either of the schools until the third week of term; even so, there was considerable discrepancy in the rate of progress of different classes.

Week		Student 1	Student 2
1	Listening A	c	c
	Listening B	c	x
	Reading A.	c	c
	Reading B	c	c
	Study Skills A.	c	c
2.	Listening A	c	x
	Listening B	c	x
	Reading A	c	c
	Reading B	c	x
	Writing A	c	x
	Writing C	c	c
	Study Skills A	c	x
	Study Skills B	c	x
3.	Listening A	c	started
	Listening B	c	
	Reading A	x	
	Reading B	x	
4.	Listening A		
	Listening B	x	
	Reading A	x	
	Reading B	c	
	Writing A		
	Writing B		
	Study Skills A	x	
	Study Skills B		
5.	Listening A	c	
	Listening b	c	
	Reading A	x	
	Reading B	x	

Appendix 6

English lesson, July 6, 1991.

At the beginning of this lesson, the teacher sorted the 16 students who had completed their assignments from those who hadn't, and escorted them to the library, leaving the remaining 22 students in the classroom to continue with their incomplete assignments. The students, 10 of them boys, seated themselves at the desks arranged in a line with their backs to the window.

T: Week 4, Writing C. This is an in-class writing assignment. You should be able to do this; the instructions are pretty clear. Please don't write rubbish. I have a lot of things to do and I don't have time to read rubbish.

The teacher arranged herself at a large table on the other side of the library where there was a collection of books being sorted.

T: If you have questions or problems, raise your hand.
After about twenty minutes, one boy took his work up to the teacher, and was soon followed by two more students. The students were directed to the piles of books on the table.

T: When you take a book, please remember which pile it came from.

S...Come and look at these run-on sentences.

The student fetched his notebook, but continued browsing the library books. Eventually he returned to his desk and discussed his errors with his neighbour before making the corrections.

T: Writing C is one paragraph, is it not? Is it not? That means you should have a topic sentence which tells me what it's all about. But many of you don't have that, and you can't show me where it is.

Many of you will be doing Writing C over again. It is to be one paragraph. you don't have to use all that information, those are the notes. You don't read the instructions.

About 40 minutes have elapsed since the students began working on the exercise.

T: Do we have to look at the instructions for Writing C?

The teacher reads aloud the instructions for the exercise (see below).

T: You are not writing another composition. If you haven't done this, you'd better come and get your books and do it again.

And for your compositions, I told you to keep your sentences short. You keep on writing run-on sentences, with and and and and and.

The teacher read one student's writing and, throwing it on the floor, sent her back to the classroom.

T: Some of you don't take the time to read back what you have written.

Student's Book 2

Writing C A Written Exercise in Class

Look at the notes below on car transport. Use them to write a short paragraph. Your paragraph should have a general topic sentence, five or six developmental sentences and a concluding sentence.

Remember that you must use the notes to write complete sentences. You will have to include articles, connectors and verbs.

Private cars - one form of transport

Advantages -convenient, can leave at any time
 more comfortable than bus, lorry, train
 can go directly to destination

Disadvantages -expensive to operate, repair
 sometimes parking problems
 traffic jams
 cause air pollution

Read through the your paragraph carefully before you hand it in. Check for sentence completeness, correct grammar, and accurate spelling.

Below are the written drafts produced by one of the students in this class (probably the top student).

Draft One

There are many forms of transport used by people. Some are donkey carts, bicycles, and cars which are the most important form of transport.

Cars like private cars are the most form of transport used, because they are convenient that means they are suitable and also useful these types of cars are very fast and reach the destination within a short time. They are also more comfortable than buses, lorry, train

Even though if private car are liked most they have some disadvantages like Expensive in operating and repairing. Sometimes the problems in parking. because traffic jams causes air pollution. The usually make more accidents than any other vehicles.

I like private cars because you can very fast and are comfortable. Without having you suffer a lot. may be you are in a desert and you don't know anyone. when you ask for a lift they can refuse.

Draft Two

Private cars are one of the most important form of transport. Private car used because they are more convenient, that means they are suitable and useful. They can move very fast, They are suitable and useful. They can move very fast, They are also more comfortable that buses and trains. They are also have some disadvantages, ie They are very Expensive in operating and repairing. Most people prefer private cars because of the above mentioned disadvantages

Draft Three

Ther are many forms of transport used by people, Some are donkey carts, bicycles and cars which are the most form of transport

There are many types of cars of some which are lorries, trucks and private cars. Private cars are mostly used because they are (convenient) that means they are suitable and useful. These types of cars are very fast, they can reach the destination within a short time. They are more comfortable